

25. (New) The method of Claim 23, wherein said polynucleotide is introduced into the plant on a vector.

26. (New) The method of Claim 23, wherein said polynucleotide is introduced into a chromosome of the plant.

27. (New) The method of Claim 23, wherein said polynucleotide comprises SEQ ID NO:2.

---

#### REMARKS

Claims 8-27 are active in this application. These claims are supported by Claims 1-7, the paragraph bridging pages 12 and 13 and the paragraph bridging pages 14-15. No new matter has been added by these amendments.

Applicants wish to thank Examiners Collins and Bui for the courteous discussion granted to the Applicants' undersigned representative on November 13, 2002.

During this discussion various amendments to place the claims in a condition for allowance were addressed. In particular, the Examiner agreed to reconsider the current rejections if the claims were directed to methods of increasing drought resistance and/or high salt condition in a plant by utilizing the raffinose synthase protein and polynucleotide encoding the protein.

Therefore, the present claims as submitted herein are directed to methods of increasing drought resistance of a plant with a polynucleotide encoding a protein having raffinose synthase activity (see Claim 8); a polynucleotide comprising SEQ ID NO:2; or a nucleotide sequence hybridizing to SEQ ID NO:2 (see Claim 13). In addition, the present claims are directed to methods of increasing the resistance of a plant to a high salt condition with a polynucleotide encoding a protein having raffinose synthase activity (see Claim 18); a polynucleotide comprising SEQ ID NO:2 or a sequence which hybridizes to SEQ ID NO:2 (see Claim 23). This method is described throughout the specification and, in particular,

Applicants direct the Examiner's attention to the disclosure in page 14-15 and the discussion of raffinose synthase genes on pages 6-7. In addition, an example presented on pages 24-25 demonstrate that expressing the raffinose synthase gene in *Arabidopsis* plant increase the drought resistance of that plant.

In addition, it was noted that in light of the numerous raffinose synthase genes known in the art from various organisms other than SEQ ID NOS: 1 and 2, the polynucleotide and the protein corresponding to the raffinose synthase enzyme as recited in, for example, with Claim 8 and 18 are adequately described and enabled. In support of the availability of these other raffinose synthase genes, Applicants submit herewith copies of GenBank entries for raffinose synthase genes from *cucumis sativus*, *Bassica juncea*, *Brassica napus*, and *Zea mays*..

Accordingly, the present claims are deemed to be both adequately described and enabled under the meaning of 35 U.S.C. § 112, first paragraph and as such withdrawal of both grounds of rejection under 35 U.S.C. § 112, first paragraph is requested.

The rejection of Claim 5 under 35 U.S.C. § 102(b) over Bachmann et al. is obviated by the cancellation of this claim.

Bachmann et al. describe that cold acclimated plants have increased levels of raffinose. However, Bachmann et al. does not describe introducing a polynucleotide encoding a raffinose synthase protein into a plant such that either the drought resistance of the plant is increased (e.g., Claim 8) or the resistance to high salt concentration is increased (e.g., Claim 18). Therefore, the present claims are not anticipated by Bachmann et al. and as such withdrawal of this ground of rejection is requested.

The objection to Claim 1 is obviated by the cancellation of this claim.

The rejection under 35 U.S.C. § 112, second paragraph is obviated by the cancellation of Claims 1-7 and accordingly addressed in the new claims submitted herein.

Applicants submit that the present application is ready for allowance. Early notification of such allowance is kindly requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER AND NEUSTADT, P.C.



Norman F. Oblon  
Registration No. 24,618  
Attorney of Record

Daniel J. Pereira Ph.D.  
Registration No. 45,518



22850

Tel.: (703) 413-3000  
Fax: (703) 413-2220

Docket No.: 204934US0X

**Marked-Up Copy**

Serial No: 09/810,186

Amendment Filed on: HERewith

IN THE CLAIMS

1-7. (Canceled).

8-27. (New).